

From Super-Brownian motion to some SPDEs with space-time noises

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Abstract

1. Super-Brownian motion and a SPDE with branching noise
2. Stochastic Cahn-Hilliard equation with Lévy space-time noise
3. The existence of a unique local solution: A new Burkholder- Davis-Gundy inequality
4. Stochastic Cahn-Hilliard equations with branching space- time noises
5. The weak convergence procedure